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**United States Patent** [19][11] Patent Number: **5,224,055**

Grundy et al.

[45] Date of Patent: **Jun. 29, 1993**[54] **MACHINE FOR CIRCUIT DESIGN**

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[57] **ABSTRACT**

A machine for circuit design comprising a processor, a configurable logic device and a design tablet device; the processor having a graphics capability and including a display, a design compiler which compiles a graphics representation of the circuit on said display to a set of coded instructions for the setting of the logic device and the design tablet device; wherein the logic device comprises a set of configurable circuit elements in integrated circuit form for providing a hardware representation of some or all of the digital part of the circuit displayed on said display, said coded instructions being operative to control the logic device to appropriately program said circuit elements; and wherein said design tablet device includes a plug board for plugging in discrete electrical components and devices, bus lines coupled to said processor, and wherein said processor is operative to provide appropriate energizing signals to said bus lines to actuate the discrete electrical components and devices.

**18 Claims, 12 Drawing Sheets**

